



## WORKPLACE SAFETY AND HEALTH IN PENNSYLVANIA



*From The  
National Institute for Occupational Safety and Health*

### State Profile 2002

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*Delivering on the Nation's promise:  
Safety and health at work for all people through prevention.*

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### The National Institute for Occupational Safety and Health

NIOSH is the primary federal agency responsible for conducting research and making recommendations for the prevention of work-related illness and injury. NIOSH is located in the Department of Health and Human Services in the Centers for Disease Control and Prevention. The NIOSH mission is to provide national and world leadership to prevent work-related illness, injury, disability, and death by gathering information, conducting scientific research, and translating the knowledge gained into products and services. As part of its mission, NIOSH supports programs in every state to improve the health and safety of workers. NIOSH has developed this document to highlight recent NIOSH programs important to workers and employers in Pennsylvania.

### The Burden of Occupational Illness and Injury in Pennsylvania

- In Pennsylvania, there are approximately 5.7 million individuals employed in the workforce.<sup>1</sup>
- In 2000, 199 workers died as a result of workplace injuries.<sup>2</sup>
- The agriculture, forestry, and fishing industry had the highest number of fatalities, followed second by transportation and public utilities, and third by construction and retail trades.<sup>2</sup>
- In 1999, the most recent year for which data are available, the rate of fatal workplace injuries was 3.9 deaths per 100,000 workers—below the national average rate of 4.5 deaths per 100,000 workers.<sup>2</sup>

### The Cost of Occupational Injury and Illness in Pennsylvania

In 2000, the most recent year for which data are available, a total of \$2.4 billion was paid for workers' compensation claims by Pennsylvania private insurers, self-insured employers, and state funds.<sup>3</sup> This figure does not include compensation paid to workers employed by the federal government and also underestimates the total financial burden for private sector businesses, since only a fraction of health care costs and earnings lost through work injuries and illnesses is covered by workers' compensation. Chronic occupational illnesses like cancer are substantially under-reported in workers' compensation systems because work-relatedness is often difficult to establish.

# **How NIOSH Prevents Worker Injuries and Diseases in Pennsylvania**

## **Health Hazard Evaluations (HHEs) and Technical Assistance**

NIOSH evaluates workplace hazards and recommends solutions when requested by employers, workers, or state or federal agencies. Since 1993, NIOSH has responded to 190 requests for HHEs in Pennsylvania in a variety of industrial settings, including the following example:

### ***Langhorne, Pennsylvania: Lead and Noise Exposures at a Firing Range***

In May 2002, NIOSH received a request for an HHE to evaluate potential lead exposures to indoor firing range users of the newly constructed Middletown Township Police Department (MTPD) firing range. NIOSH offered MTPD recommendations that included: pursuing the use of lead-free ammunition in the MTPD firing range; implementing a comprehensive hearing conservation program; using high-efficiency particulate air (HEPA) filters for air that is recirculated to the range during and immediately after its use; cleaning the floor of the range with a HEPA vacuum cleaner designed to collect lead dust; cleaning surfaces inside the range with a high-phosphate detergent to reduce surface lead contamination; prohibiting eating, drinking, and smoking in the range to eliminate possible lead ingestion; providing employees with two lockers to allow them to separate street clothes from lead-contaminated work clothes; and encouraging personnel performing clean-up of lead at the bullet trap to wear appropriate respiratory protection.

## **Fatality Assessment and Control Evaluation (FACE) Investigations**

NIOSH developed the FACE program to identify work situations with a high risk of fatality and to formulate and disseminate prevention strategies. Since 1995, there have been a total of 13 FACE investigations in Pennsylvania.

## **Fire Fighter Fatality Investigation and Prevention Program**

The purpose of the NIOSH Fire Fighter Fatality Investigation and Prevention Program is to determine factors that cause or contribute to fire fighter deaths suffered in the line of duty. NIOSH uses data from these investigations to generate fatality investigation reports and a database of case results that guides the development of prevention and intervention activities. Since 1997, there have been 12 fire fighter fatality investigations in Pennsylvania, including the following example:

### ***Pennsylvania: One Fire Fighter Killed and Another Injured Responding to Mobile Home Fire***

On January 11, 2001, a 27-year-old male volunteer fire fighter died after becoming separated, disoriented, and lost as he and another fire fighter, who was injured, were trying to escape from the interior of a burning mobile home. NIOSH recommendations to fire departments included ensuring that: incident command (IC) continuously evaluates the risk during operations at the fire scene; IC maintains accountability for all personnel at the fire scene; fire fighters use personal alert safety system devices at all incidents; and an incident safety officer, independent from the incident commander, is appointed at the fire scene.

## **Building State Capacity**

### ***Pittsburgh Research Laboratory (PRL)***

In 1996, mine safety and health research functions within the Bureau of Mines were officially transferred to the NIOSH Office for Mine Safety and Health Research. Research efforts at PRL include developing technologies to address problems affecting both underground and surface miners. Research topics include mining injury prevention, hearing loss prevention, dust and toxic substances associated with mining operations, and disaster prevention and response. The PRL, located in Bruceton, operates with a staff of 262 employees.

### ***National Personal Protective Technology Laboratory (NPPTL)***

In January 2001, the NPPTL was established at the NIOSH site in Bruceston to undertake research in personal protective technology and respirator research to protect miners, fire fighters, and other emergency responders, as well as healthcare, agricultural, and industrial workers. Upon completion of the staffing plan, there will be approximately 150-200 scientists, engineers, and associated technical and administrative staff at the facility. In fiscal year 2000, the program received initial funding to develop standards for the certification of respirators for use in counter-terrorism response. In December 2001, NIOSH issued respirator certification standards for the self-contained breathing apparatus used by most emergency responders to be protective against chemical, biological, radiological, and nuclear hazards (CBRN). Development of CBRN standards for other classes of respirators continues at NPPTL on an accelerated basis.

### ***State-Based Surveillance***

NIOSH funds the Adult Blood Lead Epidemiology and Surveillance Program (ABLES) in the Pennsylvania Department of Health. Through ABLES, the agency's staff can track and respond to cases of excessive lead exposure in adults which can cause a variety of adverse health outcomes such as kidney or nervous system damage and potential infertility.

### **Extramural Programs Funded by NIOSH**

The following are examples of recent research contracts, research grants, training grants, or cooperative agreements funded by NIOSH in the state of Pennsylvania.

#### ***A Model Hearing Conservation Program for Coal Miners***

NIOSH funds a study by Pennsylvania State University researchers to design, implement, and evaluate the efficacy of a model hearing conservation program for coal miners. The study will identify current hearing conservation best practices in other industries and appropriately adapt them to the mining population. In addition, new methods will be introduced to improve state-of-the-art hearing conservation programs.

#### ***University of Pennsylvania School of Medicine and School of Nursing***

The program at the School of Medicine provides an innovative competency-based year of training in occupational medicine, which meets requirements for certification by the American Board of Preventive Medicine in Occupational Medicine. A traditional residency track is also available. In fiscal year 2001, seven residents were in training and eight were graduated. The occupational health nursing training program at the School of Nursing aims to graduate qualified nurses to meet the regional needs in industrial sites and state and federal agencies. In fiscal year 2001, 12 students were enrolled and three students were graduated.

#### ***University of Pittsburgh***

This graduate program at the School of Public Health provides training to prepare residents for the full-time practice of occupational medicine. In fiscal year 2001, 12 residents were enrolled and three were graduated. Seven continuing education courses were offered to 324 participants.

*Additional information regarding NIOSH services and activities can be accessed through the NIOSH home page at <http://www.cdc.gov/niosh/homepage.html> or by calling the NIOSH 800-number at 1-800-356-NIOSH (1-800-356-4674).*

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<sup>1</sup>U.S. Department of Labor (DOL), Bureau of Labor Statistics (BLS), Local Area Unemployment Statistics, Current Population Survey, 2000.

<sup>2</sup>DOL, BLS in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, 1999-2000.

<sup>3</sup>National Academy of Social Insurance, *Workers' Compensation: Benefits, Coverage, and Costs, 2000 New Estimates*, May 2002.

